

REMARKS

Reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

The Office Action rejects claims 1-3, 7, 9 and 10 as obvious over Vermeersch in view of Love. Specifically, the Office Action, on page 3 lines 5-6 states that "Love teaches the desirability of removing the ink-accepting areas on a hydrophilic substrate by laser ablation and reusing the substrate (see col. 3 lines 40-47)."

Withdrawal of the rejection is solicited in view of the following remarks.

The imaging system described by Love is a hydrophilic surface (see col. 6 lines 26-50) coated by a thin layer of a hydrophobic layer material (see col. 6 lines 60-61). The thickness of the substantially uniformly hydrophobic layer approaches or approximates monomolecular dimensions and appears to be adsorbed onto the surface (see col. 7 lines 20-54). On imaging, selected portions of the hydrophobic layer are removed under the influence of sufficient energy of a laser beam, causing selective ablation (see col. 11 lines 12-17 and col. 13 lines 20-30).

The imaging element of Vermeersch comprises an image-forming layer coated on a hydrophilic surface. The image-forming layer comprises a hydrophilic binder and hydrophobic thermoplastic polymer particles, dispersed in the hydrophilic binder in an amount of 20 to 65 % by weight (see col. 5 lines 22-27 and col. 8 lines 11-16).

On imaging, the thermoplastic polymer particles soften or meld under the influence of heat and, as a result, "coagulate to form a hydrophobic agglomerate in the hydrophilic layer so that at these parts the hydrophilic layer becomes insoluble in plain water or an aqueous liquid" (see col. 7 lines 28-44). As a result, the surface of these areas is rendered ink acceptant (see col. 2 lines 16-21).

It is clear that this image-forming layer of Vermeersch is hydrophilic and not hydrophobic as disclosed by Love. Also, the imaging system of Vermeersch discloses a softening or melting process of polymer particles forming a hydrophobic agglomerate and rendering the hydrophilic image-forming layer hydrophobic and ink acceptant. It is clear this imaging process is completely different from the one disclosed by Love, namely ablation of a hydrophobic layer.

This completely different image-forming system has as consequence that, after printing, the ink accepting areas of Vermeersch cannot be removed by laser ablation in the same way as it is taught by Love, because the image-forming layer of Vermeersch does not ablate under the influence of laser exposure, but only the dispersed thermoplastic polymer particles soften or melt and form a hydrophobic agglomerate.

Even more, the image-forming layer by Love is a uniform hydrophobic layer which has a layer thickness as thin as possible to be easily ablated by laser exposure, by preference a monomolecular layer is used (see col. 7 lines 32-col. 8 line 1). The image-forming layer by Vermeersch is much thicker, namely in the range of 3.36g/m² (comprising polymer particles with an average diameter of 90 nm) as demonstrated in Example 1 on col. 15 lines 17-35. This means for the skilled person that the image-forming layer of Vermeersch is not suited to be easily ablated as taught by Love.

There is no suggestion in Love to combine the ablation method with the image-forming system of Vermeersch. On the contrary, there is a teaching away by Love in using the system of Vermeersch: "the formation of the latent image does not depend upon any photo-induced reaction, for example polymerization, cross-linking, or indeed any kind of chemical reaction as would be used to harden, soften, or otherwise cure a hydrophilic or hydrophobic layer, or render such layer either soluble or insoluble" (see col. 11 lines 47-55 and see also col. 13 lines 34-37).

In the background of the present invention, the ablation method of Love is mentioned but this system has the disadvantage of damaging the lithographic surface of typical substrates such as grained and anodized aluminum due to the very temperature that is generated in ablated lithographic coating (see present invention on page 4 lines 9-13). This damaging effect is also demonstrated in the comparative example 1 on page 14-16, reduced printing quality due to staining after 1 cycle (see results on pages 18-19). The present invention, however, "allows effective removal...in a large number of printing cycles, preferably larger than 5" (see page 4 lines 26-33). So it is clear that the present invention contains an inventive step and is not obvious over Vermeersch in view of Love.

The Office Action further rejected claims 4-6 and 8 based upon, *inter alia*, the combination of Love and Vermeersch. For the reasons set forth in the preceding paragraphs in opposition to this combination, withdrawal of the rejection is respectfully requested. Based on the same arguments as mentioned for the Rejection of claims 1-3, 7, 9 and 10, we argue that it is not obvious to combine Love with Vermeersch and therefore the claims 4-6 and 8 are new and inventive.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

In re Appln. of VERSCHUEREN et al.
Application No. 10/068,519

Respectfully submitted,



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